

# AQA GCSE PE

## PERSONAL LEARNING CHECKLIST

I need to know				
<b>Paper 1: The human body and movement in physical activity and sport</b>				
<b>The structure and functions of the musculoskeletal system</b>				
Bones	Identification of the bones at the following locations: <ul style="list-style-type: none"> <li>•• head/neck – cranium and vertebrae</li> <li>•• shoulder – scapula and humerus</li> <li>•• chest – ribs and sternum</li> <li>•• elbow – humerus, radius and ulna</li> <li>•• hip – pelvis and femur</li> <li>•• knee – femur and tibia (patella sits in front of the knee joint)</li> <li>•• ankle – tibia, fibula and talus.</li> </ul>			
Structure of the skeleton	How the skeletal system provides a framework for movement (in conjunction with the muscular system): <ul style="list-style-type: none"> <li>•• the skeletal system allows movement at a joint</li> <li>•• the shape and type of the bones determine the amount of movement (short bones enable finer controlled movements/long bones enable gross movement)</li> <li>•• flat bones for protection of vital organs</li> <li>•• the different joint types allow different types of movement</li> <li>•• the skeleton provides a point of attachment for muscles – when muscles contract they pull the bone.</li> </ul>			
Functions of the skeleton	<ul style="list-style-type: none"> <li>•• support</li> <li>•• protection of vital organs by flat bones</li> <li>•• movement</li> <li>•• structural shape and points for attachment</li> <li>•• mineral storage</li> <li>•• blood cell production.</li> </ul> Functions should be applied to performance in physical activity.			
Muscles of the body	Identification of the following muscles within the body: <ul style="list-style-type: none"> <li>•• latissimus dorsi</li> <li>•• deltoid</li> <li>•• rotator cuffs</li> <li>•• pectorals</li> <li>•• biceps</li> <li>•• triceps</li> <li>•• abdominals</li> <li>•• hip flexors</li> <li>•• gluteals</li> <li>•• hamstring group (not individual names)</li> <li>•• quadriceps group (not individual names)</li> <li>•• gastrocnemius</li> <li>•• tibialis anterior.</li> </ul> The role of tendons (attaching muscle to bones).			
Structure of a synovial joint	Identification of the following structures of a synovial joint and how they help to prevent injury:			

	<ul style="list-style-type: none"> <li>•• synovial membrane</li> <li>•• synovial fluid</li> <li>•• joint capsule</li> <li>•• bursae</li> <li>•• cartilage</li> <li>•• ligaments.</li> </ul>			
Types of freely movable joints that allow different movements	<p>Identification of the types of joints with reference to the following:</p> <ul style="list-style-type: none"> <li>•• elbow, knee and ankle – hinge joint</li> <li>•• hip and shoulder – ball and socket.</li> </ul>			
How joints differ in design to allow certain types of movement at a joint	<p>Understand that the following types of movement are linked to the appropriate joint type, which enables that movement to take place:</p> <ul style="list-style-type: none"> <li>•• flexion/extension at the shoulder, elbow, hip and knee</li> <li>•• abduction/adduction at the shoulder</li> <li>•• rotation of the shoulder</li> <li>•• plantar flexion/dorsiflexion at the ankle.</li> </ul> <p>Application to specific sporting actions is in <a href="#">movement analysis</a>.</p>			
How the major muscles and muscle groups of the body work antagonistically on the major joints of the skeleton to affect movement in physical activity at the major movable joints	<p>With reference to the shoulder, elbow, hip, knee and ankle joints:</p> <ul style="list-style-type: none"> <li>•• major muscle groups operating at these joints (see above)</li> <li>•• the action of prime movers (agonists)/antagonists</li> <li>•• bones located at the joint (see above)</li> <li>•• how these muscle groups work isometrically and isotonicity (concentric/eccentric).</li> </ul> <p>The difference between concentric and eccentric (isotonic) contractions.</p>			
<b>The structure and functions of the cardio-respiratory system</b>				
The pathway of air Identification of the pathway of air (limited to):	<ul style="list-style-type: none"> <li>•• mouth/nose</li> <li>•• trachea</li> <li>•• bronchi</li> <li>•• bronchioles</li> <li>•• lungs</li> <li>•• alveoli.</li> </ul>			
Gaseous exchange	<p>Gas exchange at the alveoli – features that assist in gaseous exchange:</p> <ul style="list-style-type: none"> <li>•• large surface area of alveoli</li> <li>•• moist thin walls (one cell thick)</li> <li>•• short distance for diffusion (short diffusion pathway)</li> <li>•• lots of capillaries</li> <li>•• large blood supply</li> <li>•• movement of gas from high concentration to low concentration.</li> </ul> <p>Oxygen combines with haemoglobin in the red blood cells to form oxyhaemoglobin. Should also know that haemoglobin can carry carbon dioxide.</p>			
Blood vessels	<p>Structure of arteries, capillaries and veins:</p> <ul style="list-style-type: none"> <li>•• size/diameter</li> <li>•• wall thickness</li> <li>•• valves in veins.</li> </ul>			

	<p>How the structure of each blood vessel relates to the function:</p> <ul style="list-style-type: none"> <li>•• carrying oxygenated/deoxygenated blood to/ from the heart</li> <li>•• gas exchange</li> <li>•• blood pressure</li> <li>•• redistribution of blood during exercise (vasoconstriction and vasodilation).</li> </ul> <p>Know the names of the arteries and the veins associated with blood entering and leaving the heart.</p>			
Structure of the heart	<p>Structure of the heart:</p> <ul style="list-style-type: none"> <li>•• atria (left and right atria)</li> <li>•• ventricles (left and right ventricles).</li> </ul>			
The cardiac cycle and the pathway of the blood	<p>The order of the cardiac cycle, including diastole (filling) and systole (ejection) of the chambers.</p> <p>This starts from a specified chamber of the heart, eg the cardiac cycle starting at the right ventricle.</p> <p>Pathway of the blood:</p> <ul style="list-style-type: none"> <li>•• deoxygenated blood into right atrium</li> <li>•• then into the right ventricle</li> <li>•• the pulmonary artery then transports deoxygenated blood to the lungs</li> <li>•• gas exchange occurs (blood is oxygenated)</li> <li>•• pulmonary vein transports oxygenated blood back to the left atrium</li> <li>•• then into the left ventricle</li> <li>•• before oxygenated blood is ejected and transported to the body via the aorta.</li> </ul> <p>Valve names are not required but should know that valves open due to pressure and close to prevent backflow.</p>			
Cardiac output, stroke volume and heart rate	<p>Cardiac output, stroke volume and heart rate, and the relationship between them.</p> <p>Cardiac output (Q) = stroke volume x heart rate.</p> <p>Know how to interpret heart rate graphs, including an anticipatory rise, and changes in intensity.</p>			
Mechanics of breathing – the interaction of the intercostal muscles, ribs and diaphragm in breathing	<p>Inhaling (at rest) with reference to the roles of the:</p> <ul style="list-style-type: none"> <li>•• intercostals</li> <li>•• rib cage</li> <li>•• diaphragm.</li> </ul> <p>Exhaling (at rest) with reference to the roles of the:</p> <ul style="list-style-type: none"> <li>•• intercostals</li> <li>•• rib cage</li> <li>•• diaphragm.</li> </ul> <p>Lungs can expand more during exercise (inspiration) due to the use of pectorals and sternocleidomastoid. During exercise (expiration), the rib cage is pulled down quicker to force air out quicker due to use of the abdominal muscles.</p> <p>Changes in air pressure cause the inhalation and exhalation.</p>			
Interpretation of a spirometer trace	<p>Identification of the following volumes on a spirometer trace and an understanding of how these may change from rest to exercise:</p> <ul style="list-style-type: none"> <li>•• tidal volume</li> <li>•• expiratory reserve volume</li> <li>•• inspiratory reserve volume</li> <li>•• residual volume.</li> </ul>			

	Interpretation and explanation of a spirometer trace (and continue a trace on paper) to reflect the difference in a trace between rest and the onset of exercise.			
<b>Anaerobic and aerobic exercise</b>				
Understanding the terms aerobic exercise (in the presence of oxygen) and anaerobic exercise (in the absence of enough oxygen)	<p>Definition of the terms:</p> <ul style="list-style-type: none"> <li>•• aerobic exercise</li> <li>•• anaerobic exercise.</li> </ul> <p>Summary of aerobic exercise (glucose + oxygen → energy + carbon dioxide + water).</p> <p>Summary of anaerobic exercise (glucose → energy + lactic acid).</p>			
The use of aerobic and anaerobic exercise in practical examples of differing intensities	<p>Link practical examples of sporting situations to aerobic or anaerobic exercise.</p> <p>Identification of the duration and/or intensity of a physical activity in order to identify and justify why it would be aerobic or anaerobic, eg marathon (aerobic), sprint (anaerobic).</p>			
Excess post-exercise oxygen consumption (EPOC)/oxygen debt as the result of muscles respiring anaerobically during vigorous exercise and producing lactic acid	<p>Definition of the term EPOC (oxygen debt). An understanding that EPOC (oxygen debt) is caused by anaerobic exercise (producing lactic acid) and requires the performer to maintain increased breathing rate after exercise to repay the debt.</p>			
The recovery process from vigorous exercise	<p>The following methods to recover from exercise, including the reasons for their use:</p> <ul style="list-style-type: none"> <li>•• cool down – maintain elevated breathing rate/heart rate (blood flow), stretching, removal of lactic acid</li> <li>•• manipulation of diet – rehydration, carbohydrates for energy</li> <li>•• ice baths/massage – prevention of delayed onset of muscle soreness (DOMS).</li> </ul> <p>Students should be taught to evaluate the use of these methods, justifying their relevance to different sporting activities.</p>			
<b>The short and long term effects of exercise</b>				
Immediate effects of exercise (during exercise)	<ul style="list-style-type: none"> <li>•• hot/sweaty/red skin</li> <li>•• increase in depth and frequency of breathing</li> <li>•• increased heart rate.</li> </ul>			
Short-term effects of exercise (24 to 36 hours after exercise)	<ul style="list-style-type: none"> <li>•• tiredness/fatigue</li> <li>•• light headedness</li> <li>•• nausea</li> <li>•• aching/delayed onset of muscle soreness (DOMS)/cramp.</li> </ul>			
Long-term effects of exercise	<ul style="list-style-type: none"> <li>•• body shape may change</li> <li>•• improvements in specific components of fitness</li> </ul>			

(months and years of exercising)	<ul style="list-style-type: none"> <li>•• build muscle strength</li> <li>•• improve muscular endurance</li> <li>•• improve speed</li> <li>•• improve suppleness</li> <li>•• build cardio-vascular endurance</li> <li>•• improve stamina</li> <li>•• increase in the size of the heart (hypertrophy)</li> <li>•• lower resting heart rate (bradycardia).</li> </ul> <p>Linked to the components of fitness to understand the long term effects of exercise.</p>			
<b>Movement analysis: Lever systems, examples of their use in activity and the mechanical advantage they provide in movement</b>				
First, second and third class lever systems within sporting examples	<p>Identification of first, second and third class lever systems. Basic drawings of the three classes of lever to illustrate the positioning of:</p> <ul style="list-style-type: none"> <li>•• fulcrum</li> <li>•• load (resistance)</li> <li>•• effort.</li> </ul> <p>Draw linear versions of a lever, showing the positioning of the fulcrum, load/resistance and effort.</p> <p>Know how to draw anatomical body parts but must be able to link the correct lever to a sporting movement or action.</p> <p>Interpretation of sporting movements or actions which involve flexion or extension of the elbow and/or knee, and plantar or dorsi-flexion at the ankle.</p>			
Mechanical advantage – an understanding of mechanical advantage in relation to the three lever systems	<p>Label the effort arm and load/resistance arm on the three classes of lever.</p> <p>Mechanical advantage = effort arm ÷ weight (resistance) arm.</p> <p>Labelling of the effort arm and resistance arm on lever drawings, and interpretation of the mechanical advantage of that lever.</p>			
Analysis of basic movements in sporting examples	<p>Types of movement:</p> <ul style="list-style-type: none"> <li>•• flexion/extension at the shoulder, elbow, hip and knee</li> <li>•• abduction/adduction at the shoulder</li> <li>•• rotation of the shoulder</li> <li>•• plantar flexion/dorsiflexion at the ankle.</li> </ul> <p>This section links specific sporting actions to the types of movement.</p> <p><a href="#">Applied anatomy and physiology</a> links the joint type to the type of movement only. This should include but not be limited to the following sporting actions:</p> <ul style="list-style-type: none"> <li>•• elbow action in push-ups/football throw in</li> <li>•• hip, knee and ankle action in running, kicking, standing vertical jump, basic squats</li> <li>•• shoulder action during cricket bowling (overarm rotation).</li> </ul>			
<b>Planes and axes of movement</b>				
Identification of the relevant planes (frontal, transverse, sagittal) and axes (longitudinal, transverse, sagittal) of	<p>Planes (frontal, transverse, sagittal) and axes (longitudinal, transverse, sagittal) should be related to sporting actions. Know planes/axes that should include but not be limited to the following sporting actions:</p> <ul style="list-style-type: none"> <li>•• front somersault/forward roll/running action</li> <li>•• 360° twist (ice skating spin)/discus thrower rotating in circle effort</li> <li>•• cartwheel.</li> </ul>			

movement used whilst performing sporting actions				
<b>Physical training</b>				
<b>The relationship between health and fitness and the role that exercise plays in both</b>				
Health and fitness	Definitions of health and fitness.			
The relationship between health and fitness	The relationship between health and fitness. Decreased fitness because of ill health, ie poor health can result in an inability to train, lowers fitness. Increased fitness despite ill health, ie unhealthy but able to train, increases fitness.			
<b>The components of fitness, benefits for sport and how fitness is measured and improved</b>				
The components of fitness	Definitions of the following components of fitness: <ul style="list-style-type: none"> <li>•• agility</li> <li>•• balance</li> <li>•• cardiovascular endurance (aerobic power)</li> <li>•• coordination</li> <li>•• flexibility</li> <li>•• muscular endurance</li> <li>•• power/explosive strength (anaerobic power)</li> <li>•• reaction time</li> <li>•• strength (maximal, static, dynamic and explosive)</li> <li>•• speed.</li> </ul>			
Linking sports and physical activity to the required components of fitness	Understand and justify why the components of fitness (as stated above) may or may not be needed when performing certain physical activities and sports.			
Reasons for and limitations of fitness testing	Reasons for fitness testing: <ul style="list-style-type: none"> <li>•• to identify strengths and/or weaknesses in a performance/the success of a training programme</li> <li>•• to monitor improvement</li> <li>•• to show a starting level of fitness</li> <li>•• to inform training requirements</li> <li>•• to compare against norms of the group/national averages</li> <li>•• to motivate/sets goals</li> <li>•• to provide variety to a training programme.</li> </ul> Limitations of fitness testing: <ul style="list-style-type: none"> <li>•• tests are often not sport specific/too general</li> <li>•• they do not replicate movements of activity</li> <li>•• they do not replicate competitive conditions required in sports</li> <li>•• many do not use direct measuring/submaximal – therefore inaccurate/some need motivation/some have questionable reliability</li> <li>•• they must be carried out with the correct procedures to increase validity.</li> </ul>			
Measuring the components of fitness	Knowledge of the main procedures of the tests used to measure the following components of fitness: <ul style="list-style-type: none"> <li>•• agility – Illinois Agility Test</li> <li>•• balance – Stork Balance</li> </ul>			

	<ul style="list-style-type: none"> <li>•• cardiovascular endurance (aerobic power) – Multi Stage Fitness Test</li> <li>•• coordination – Wall Toss Test</li> <li>•• flexibility – Sit and Reach Test</li> <li>•• muscular endurance – Sit-Up Bleep Test</li> <li>•• power/explosive strength (anaerobic power) – Vertical Jump Test</li> <li>•• reaction time – Ruler Drop Test</li> <li>•• maximal strength – One Rep Max Test</li> <li>•• speed – 30 Metre Sprint Test</li> <li>•• strength – Handgrip Dynamometer Test.</li> </ul> <p>Testing procedures refers to 'how each test is carried out' and includes reference to how the test is organised (when applicable) in relation to the following:</p> <ul style="list-style-type: none"> <li>•• the facilities and the equipment needed to set it up</li> <li>•• the procedures that have to be followed – the tasks and the rules</li> <li>•• the measurements that are used to score the performance</li> <li>•• the way conclusions are drawn from the scores/results.</li> </ul> <p>Evaluate whether or not these tests are relevant to performers in different sporting activities.</p>			
Demonstration of how data are collected for fitness testing	Understanding of how test scores are measured/recorded (eg in seconds, levels, centimetres, numbers). Definitions of the terms qualitative and quantitative, in relation to the collection of fitness testing data. Understanding that the quantitative data collected during fitness testing can be compared to national averages.			
<b>The principles of training and their application to personal exercise/training programmes</b>				
The principles of training and overload	<p>Key principles of training.</p> <p>SPORT to include:</p> <ul style="list-style-type: none"> <li>•• specificity</li> <li>•• progressive overload</li> <li>•• reversibility</li> <li>•• tedium.</li> </ul> <p>Key principles of overload.</p> <p>FITT to include:</p> <ul style="list-style-type: none"> <li>•• frequency</li> <li>•• intensity</li> <li>•• time</li> <li>•• type.</li> </ul> <p>Be able to explain the terms - what they mean.</p>			
Application of the principles of training	How the principles of training can be applied to bring about improvements in fitness. Application of the principles to sporting examples.			
Types of training	<p>Understand the distinctions between different types of training.</p> <p>Circuit training – consider space available, equipment available, number of circuit stations, work:rest ratio, the content/demand of the circuit can be altered in order to improve different components of fitness.</p> <p>Continuous training – sustained exercise at a constant rate (steady state) without rests, involving aerobic demand for a</p>			

	<p>minimum of 20 minutes, eg running, swimming, rowing, cycling.</p> <p>Fartlek training – varying speed, terrain and work:rest ratios.</p> <p>Interval training/high intensity interval training – periods of exercising hard, interspersed with periods of rest or low intensity exercise.</p> <p>Static stretching – a way to stretch to increase flexibility, held (isometric) for up to 30 seconds, using correct technique, advisable to avoid over stretching.</p> <p>Weight training – choice of weight/exercise depends on fitness aim, eg strength/power training or muscular endurance, the importance of safe practice/lifting technique, the need for spotters.</p> <p>Plyometric training – use of plyometric exercises, eg bounding, depth jumping, to increase power.</p> <p>Basic physiological understanding (eccentric contraction followed by larger concentric contraction).</p> <p>Any training (and practice) method must take account of the following:</p> <ul style="list-style-type: none"> <li>•• the training purpose(s), training thresholds/training targets/training zones (see calculating intensities below)</li> <li>•• rest/recovery.</li> </ul>			
<p>Identification of the advantages and disadvantages (the effects on the body) of training types linked to specific aims</p>	<p>The advantages and disadvantages (the effects on the body) of each type of training method stated above.</p> <p>You must be able to select and evaluate appropriate training methods for various (aerobic and anaerobic) fitness needs and make links to sporting activity, eg continuous training is fully appropriate to marathon runners.</p>			
<b>How to optimise training and prevent injury</b>				
<p>Calculating intensities to optimise training effectiveness</p>	<p>Definition of training threshold.</p> <p>Calculate the aerobic/anaerobic training zone:</p> <ul style="list-style-type: none"> <li>•• calculate maximum heart rate (220 minus age)</li> <li>•• calculate aerobic training zone (60–80% of maximal heart rate)</li> <li>•• calculate anaerobic training zone (80–90% of maximal heart rate).</li> </ul> <p>For circuit training, altering the time/rest/content of the circuit will determine the fitness aim.</p> <p>How to calculate one repetition maximum (one rep max) as part of weight training and how to make use of one rep max, with reference to:</p> <ul style="list-style-type: none"> <li>•• strength/power training (high weight/low reps – above 70% of one rep max, approximately three sets of 4–8 reps)</li> <li>•• muscular endurance (low weight/high reps – below 70% of one rep max, approximately three sets of 12–15 reps).</li> </ul>			
<p>Considerations to prevent injury</p>	<p>The training type/intensity should match the training purpose (eg aerobic or anaerobic).</p> <p>Where applicable, the following factors should be taken into account in order to prevent injury:</p> <ul style="list-style-type: none"> <li>•• a warm up should be completed</li> <li>•• over training should be avoided, eg appropriate weight</li> <li>•• appropriate clothing and footwear should be worn</li> </ul>			

	<ul style="list-style-type: none"> <li>•• taping/bracing should be used as necessary</li> <li>•• hydration should be maintained</li> <li>•• stretches should not be overstretched or bounce</li> <li>•• technique used should be correct, eg lifting technique</li> <li>•• appropriate rest in between sessions to allow for recovery.</li> </ul>			
Specific training techniques – high altitude training as a form of aerobic training	<p>How high altitude training is carried out:</p> <ul style="list-style-type: none"> <li>•• train at high altitude</li> <li>•• there is less oxygen in the air and oxygen carrying capacity is reduced</li> <li>•• the body compensates by making more red blood cells to carry oxygen.</li> </ul> <p>Be able to evaluate the benefits and the limitations of altitude training for different sports performers. Students do not need to be taught how to calculate intensities for altitude training.</p>			
Seasonal aspects	<p>Names of the three training seasons:</p> <ul style="list-style-type: none"> <li>•• pre-season/preparation</li> <li>•• competition/peak/playing season</li> <li>•• post-season/transition.</li> </ul> <p>An understanding of what each of the seasons entails (aims):</p> <ul style="list-style-type: none"> <li>•• pre-season/preparation – general/aerobic fitness, specific fitness needs</li> <li>•• competition/peak/playing season – maintain fitness levels, work on specific skills</li> <li>•• post-season/transition – rest and light aerobic training to maintain a level of general fitness.</li> </ul> <p>An understanding of the benefits of each season to the performer. Be able to apply and justify the characteristics of the seasonal aspects to different sporting activities.</p>			
<b>Effective use of warm up and cool down</b>				
Warming up	<p>The constituent parts of warming up and cooling down. Warming up should include:</p> <ul style="list-style-type: none"> <li>•• gradual pulse raising activity</li> <li>•• stretching</li> <li>•• skill based practices/familiarisation</li> <li>•• mental preparation</li> <li>•• increase amount of oxygen to the working muscles.</li> </ul>			
Cooling down	<p>Cooling down should include:</p> <ul style="list-style-type: none"> <li>•• maintain elevated breathing and heart rate, eg walk, jog</li> <li>•• gradual reduction in intensity</li> <li>•• stretching.</li> </ul>			
Justify appropriate elements of a warm up and a cool down for different sporting activities.	<p>The benefits of warming up:</p> <ul style="list-style-type: none"> <li>•• effect on body temperature</li> <li>•• range of movement increased</li> <li>•• gradual increase of effort to full pace</li> <li>•• psychological preparation</li> <li>•• practice of movement skills through the whole range of movement</li> <li>•• injury prevention.</li> </ul> <p>The benefits of cooling down:</p> <ul style="list-style-type: none"> <li>•• allowing the body to recover</li> <li>•• the removal of lactic acid/CO2/waste products</li> <li>•• prevent (delayed onset of) muscle soreness/DOMS.</li> </ul>			
<b>Use of data</b>				

<b>Demonstrate an understanding of how data are collected – both qualitative and quantitative</b>				
Quantitative data	Quantitative data deals with numbers.			
Methods for collecting quantitative data	<ul style="list-style-type: none"> <li>• questionnaires</li> <li>• surveys.</li> </ul>			
Qualitative data	Qualitative data deals with descriptions.			
Methods for collecting qualitative data	<ul style="list-style-type: none"> <li>• interviews</li> <li>• observations.</li> </ul>			
<b>Present data (including tables and graphs)</b>				
Presenting data	<p>How to present data in tables.</p> <p>How to plot basic:</p> <ul style="list-style-type: none"> <li>• bar charts</li> <li>• line graphs.</li> </ul> <p>How to label x and y axes on bar charts and line graphs.</p>			
<b>Analyse and evaluate data</b>				
Analysis and evaluation of data	<p>Interpretation of data presented in basic:</p> <ul style="list-style-type: none"> <li>• tables</li> <li>• bar charts</li> <li>• line graphs</li> <li>• pie charts.</li> </ul>			

I need to know				
<b>Paper 2: Socio-cultural influences and well-being in physical activity and sport</b>				
<b>Sports psychology</b>				
<b>Classification of skills (basic/complex, open/closed)</b>				
Skill and ability	Definitions of skill and ability.			
Classifications of skill	<p>Basic definition of the following skill classifications:</p> <ul style="list-style-type: none"> <li>• basic/complex</li> <li>• open/closed</li> <li>• self-paced/externally paced</li> <li>• gross/fine.</li> </ul> <p>Be able to choose and justify the appropriate classifications in relation to sporting examples.</p>			
	<p>Definitions of types of goals Basic definitions of the following types of goals:</p> <ul style="list-style-type: none"> <li>• performance goals (personal performance/no social comparison)</li> <li>• outcome goals (winning/result).</li> </ul> <p>Appropriate performance and/or outcome targets for sporting examples.</p>			
<b>The use of goal setting and SMART targets to improve and/or optimise performance</b>				

The use and evaluation of setting performance and outcome goals in sporting examples	Performance and outcome goals can be combined. However, it is generally accepted that outcome goals should be avoided as they rely on factors that cannot be controlled, eg other performers. Beginners prefer to avoid outcome goals because failure can demotivate/winning may be an unrealistic goal.			
The use of SMART targets to improve and/or optimise performance	SMART targets of goal setting are: <ul style="list-style-type: none"> <li>•• specific</li> <li>•• measurable</li> <li>•• accepted</li> <li>•• realistic</li> <li>•• time bound.</li> </ul>			
<b>Basic information processing</b>				
Basic information processing model	The role of each stage (input, decision making, output and feedback) of the model. Input – information from the display (senses), selective attention. Decision making – selection of appropriate response from memory. The role of long term and short term memory. Output – information sent to muscles to carry out the response. Feedback – received via self (intrinsic) and/or others (extrinsic). Draw (in a box format) and/or explain the stages of a basic model of information processing. Students should be taught to apply the basic information processing model to skills from sporting examples.			
<b>Guidance and feedback on performance</b>				
Identify examples of, and evaluate, the effectiveness of the use of types of guidance, with reference to beginners and elite level performers	Evaluation of the use of the following types of guidance with specific links to: <ul style="list-style-type: none"> <li>•• visual (seeing)</li> <li>•• verbal (hearing)</li> <li>•• manual (assist movement – physical)</li> <li>•• mechanical (use of objects/aids).</li> </ul> You need to be able to choose and justify which types of guidance are appropriate for beginners and/or elite level performers. This should include examples of how the guidance can be given, eg visual via demonstration.			
Identify examples of, and evaluate, the effectiveness of the use of types of feedback, with reference to beginners and elite level performers	Evaluation of the use of the following types of feedback with specific links to beginners and to elite level performers: <ul style="list-style-type: none"> <li>•• positive/negative</li> <li>•• knowledge of results/knowledge of performance</li> <li>•• extrinsic/intrinsic.</li> </ul> Students need to be taught what each type of feedback entails and be able to choose and justify which types of feedback are appropriate for a beginners and/or an elite level performers.			
<b>Mental preparation for performance</b>				
Arousal	Definition of arousal.			
Inverted-U theory	The shape of the 'inverted-U' placed appropriately in a graph depicting y axis (performance level – low to high) and x axis (arousal level – low to high).			

	<p>You must be able to draw an inverted-U graph with both x and y axis appropriately labelled.</p> <p>Describe the inverted-U graph.</p> <p>The relationship between arousal level and performance level, eg when under aroused, performance level is low/under or over arousal causing low performance levels.</p>			
How optimal arousal levels vary according to the skill being performed in a physical activity or sport	<p>Link appropriate arousal level (high/low) to gross/fine skills in sporting actions.</p> <p>Link skills (not sports) to an appropriate arousal level, eg a tackle in rugby will need a high arousal level.</p>			
How arousal can be controlled using stress management techniques before or during a sporting performance	<p>Knowledge of the following stress management techniques:</p> <ul style="list-style-type: none"> <li>•• deep breathing</li> <li>•• mental rehearsal/visualisation/imagery</li> <li>•• positive self talk.</li> </ul> <p>You need to be able to explain how these techniques are carried out, using sporting examples.</p>			
Understand the difference between direct and indirect aggression with application to specific sporting examples	<p>Definition of direct and indirect aggression.</p> <p>You need to know the meaning of the terms direct and indirect aggression, and be able to suggest examples of direct/indirect aggression in sport.</p>			
Understand the characteristics of introvert and extrovert personality types, including examples of sports which suit these particular personality types	<p>Characteristics of an introvert:</p> <ul style="list-style-type: none"> <li>•• shy/quiet</li> <li>•• thoughtful</li> <li>•• enjoy being on their own/loner.</li> </ul> <p>Tend to play individual sports when:</p> <ul style="list-style-type: none"> <li>•• concentration/precision (fine skill) is required</li> <li>•• low arousal is required.</li> </ul> <p>Characteristics of an extrovert:</p> <ul style="list-style-type: none"> <li>•• enjoy interaction with others/sociable/aroused by others</li> <li>•• enthusiastic/talkative</li> <li>•• prone to boredom when isolated/by themselves.</li> </ul> <p>Tend to play team sports when:</p> <ul style="list-style-type: none"> <li>•• there is a fast pace</li> <li>•• concentration may need to be low</li> <li>•• gross skills are used.</li> </ul>			
Definition of intrinsic and extrinsic motivation, as used in sporting examples	<p>Intrinsic is from within – for pride/selfsatisfaction/personal achievement.</p> <p>Extrinsic is:</p> <ul style="list-style-type: none"> <li>•• from another source/person</li> <li>•• tangible – certificates/trophies, medals</li> <li>•• intangible – praise/feedback/applause.</li> </ul> <p>You need to be able to explain appropriate examples of intrinsic and extrinsic motivation linked to sporting examples.</p>			

Evaluation of the merits of intrinsic and extrinsic motivation in sport	<p>Intrinsic is generally deemed more effective.</p> <p>Overuse of extrinsic can undermine the strength of intrinsic.</p> <p>Performer can become reliant on extrinsic.</p> <p>Intrinsic is more likely to lead to continued effort and participation.</p> <p>Extrinsic rewards may result in feelings of pride/self-satisfaction.</p>			
<b>Socio-cultural influences</b>				
<b>Engagement patterns of different social groups in physical activity and sport</b>				
Engagement patterns of different social groups and the factors affecting participation	<p>Engagement patterns in physical activity and sport can differ between different social groups.</p> <p>Understand factors that contribute to engagement patterns in the following social groups:</p> <ul style="list-style-type: none"> <li>•• gender</li> <li>•• race/religion/culture</li> <li>•• age</li> <li>•• family/friends/peers</li> <li>•• disability.</li> </ul> <p>You need to be able to make justifiable links between the following factors and their relevance to engagement patterns of the groups above:</p> <ul style="list-style-type: none"> <li>•• attitudes</li> <li>•• role models</li> <li>•• accessibility (to facilities/clubs/activities)</li> <li>•• media coverage</li> <li>•• sexism/stereotyping</li> <li>•• culture/religion/religious festivals</li> <li>•• family commitments</li> <li>•• available leisure time</li> <li>•• familiarity</li> <li>•• education</li> <li>•• socio-economic factors/disposable income</li> <li>•• adaptability/inclusiveness.</li> </ul>			
<b>Commercialisation of physical activity and sport</b>				
Commercialisation	<p>Definition of commercialisation.</p> <p>The relationship between sport, sponsorship and the media.</p>			
Types of sponsorship and the media	<p>Definitions of sponsorship and the media.</p> <p>Types of sponsorship:</p> <ul style="list-style-type: none"> <li>•• financial</li> <li>•• clothing and equipment, including footwear</li> <li>•• facilities.</li> </ul> <p>Types of media:</p> <ul style="list-style-type: none"> <li>•• television</li> <li>•• radio</li> <li>•• the press</li> <li>•• the internet</li> <li>•• social media.</li> </ul>			
Positive and negative impacts of sponsorship and the media	<p>The positive and the negative impacts of commercialised activity (sponsorship and the media) on the following:</p> <ul style="list-style-type: none"> <li>•• performer</li> <li>•• sport</li> <li>•• official</li> <li>•• audience/spectator</li> <li>•• sponsor/company.</li> </ul>			

	You need to be able to justify why the impact is positive and/or negative.			
Positive and negative impacts of technology	<p>The positive and the negative impacts of technology on the following:</p> <ul style="list-style-type: none"> <li>•• performer</li> <li>•• sport</li> <li>•• official</li> <li>•• audience/spectator</li> <li>•• sponsor/company.</li> </ul> <p>You need to be able to justify why the impact is positive and/or negative. You need to be aware of examples of technology used in sport (eg Hawkeye, Television Match Official). However, the focus should be on technology generically, not on specific types of technology (eg Hawkeye, Television Match Official).</p>			
<b>Ethical and socio-cultural issues in physical activity and sport</b>				
Conduct of performers	<p>Definitions of the following terms:</p> <ul style="list-style-type: none"> <li>•• etiquette</li> <li>•• sportsmanship</li> <li>•• gamesmanship</li> <li>•• contract to compete.</li> </ul> <p>You need to know sporting examples of these terms.</p>			
Prohibited substances	<p>Categories of prohibited substances, including the basic positive effects and negative side effects:</p> <ul style="list-style-type: none"> <li>•• stimulants</li> <li>•• narcotic analgesics</li> <li>•• anabolic agents</li> <li>•• peptide hormones (EPO)</li> <li>•• diuretics.</li> </ul>			
Prohibited methods (blood doping)	<p>How blood doping occurs and the effects/side effects of doing it.</p> <p>Blood doping involves the removal of blood a few weeks prior to competition. The blood is frozen and re-injected just before competition.</p> <p>You need to know how blood doping leads to increased red blood cell count and be able to evaluate which types of sporting performers this could benefit.</p> <p>Side effects can be:</p> <ul style="list-style-type: none"> <li>•• thickening of blood (viscosity)</li> <li>•• potential infection</li> <li>•• potential for heart attack</li> <li>•• embolism (blockage of vessel).</li> </ul>			
Drugs subject to certain restrictions (beta blockers)	<p>Beta blockers are taken to:</p> <ul style="list-style-type: none"> <li>•• reduce heart rate, muscle tension and blood pressure</li> <li>•• reduce the effects of adrenaline</li> <li>•• improve fine control/preciseness.</li> </ul> <p>Side effects can lead to:</p> <ul style="list-style-type: none"> <li>•• nausea</li> <li>•• weakness</li> <li>•• heart problems.</li> </ul> <p>Beta blockers should be prescribed by a medical professional.</p>			
Which type of performers may use different types	<p>Stimulants – alertness</p> <p>Narcotic analgesics – pain killers from over training</p> <p>Anabolic agents – muscle mass</p> <p>Diuretics – lose weight</p>			

of performance enhancing drugs (PEDs) with sporting examples	Peptide hormones – oxygen carrying capacity Blood doping – oxygen carrying capacity Beta blockers – for fine motor control You need to understand in which sports performers may decide to use PEDs, with examples.			
The advantages and disadvantages for the performer of taking PEDs	Advantages include: <ul style="list-style-type: none"> <li>•• increased chances of success</li> <li>•• fame</li> <li>•• wealth</li> <li>•• level playing field.</li> </ul> Disadvantages include: <ul style="list-style-type: none"> <li>•• cheating/immoral</li> <li>•• associated health risks</li> <li>•• fines</li> <li>•• bans</li> <li>•• reputational damage.</li> </ul>			
The disadvantages to the sport/event of performers taking PEDs	Disadvantages include: <ul style="list-style-type: none"> <li>•• reputation</li> <li>•• credibility.</li> </ul>			
Spectator behaviour (the positive and the negative effects of spectators at events)	The positive influence of spectators at matches/events: <ul style="list-style-type: none"> <li>•• creation of atmosphere</li> <li>•• home-field advantage (for home team/individuals).</li> </ul> The negative influence of spectators at matches/events: <ul style="list-style-type: none"> <li>•• negative effect on performance as a result of increased pressure</li> <li>•• potential for crowd trouble/hooliganism</li> <li>•• safety costs/concerns</li> <li>•• negative effect on participation numbers amongst younger performers.</li> </ul>			
Reasons why hooliganism occurs	Reasons for hooliganism: <ul style="list-style-type: none"> <li>•• rivalries</li> <li>•• hype</li> <li>•• fuelled by alcohol/drugs</li> <li>•• gang culture</li> <li>•• frustration (eg at official's decisions)</li> <li>•• display of masculinity.</li> </ul>			
Strategies employed to combat hooliganism/spectator behaviour	Strategies include: <ul style="list-style-type: none"> <li>•• early kick-offs</li> <li>•• all-seater stadia</li> <li>•• segregation of fans</li> <li>•• improved security</li> <li>•• alcohol restrictions</li> <li>•• travel restrictions/banning orders</li> <li>•• education/promotional activity/campaigns and high profile endorsements.</li> </ul> You need to be able to evaluate the effectiveness of these strategies, eg high costs of security versus safety of spectators.			
<b>Health, fitness and well-being</b>				
<b>Physical, emotional and social health, fitness and well-being</b>				
Linking participation in physical activity, exercise	Reasons for participation in physical activity, exercise and sport, and how performance in physical activity/sport can increase health, wellbeing and fitness. Physical health and well-being:			

<p>and sport to health, well-being and fitness, and how exercise can suit the varying needs of different people</p>	<ul style="list-style-type: none"> <li>•• improves heart function</li> <li>•• improves efficiency of the body systems</li> <li>•• reduces the risk of some illness</li> <li>•• able to do everyday tasks</li> <li>•• to avoid obesity.</li> </ul> <p>Mental health and well-being:</p> <ul style="list-style-type: none"> <li>•• reduces stress/tension</li> <li>•• release of feel good hormones (serotonin)</li> <li>•• able to control emotions.</li> </ul> <p>Social health and well-being:</p> <ul style="list-style-type: none"> <li>•• opportunities to socialise/make friends</li> <li>•• cooperation</li> <li>•• teamwork</li> <li>•• have essential human needs (food, shelter, clothing).</li> </ul> <p>Fitness:</p> <ul style="list-style-type: none"> <li>•• improves fitness</li> <li>•• reduces the chances of injury</li> <li>•• can aid in the physical ability to work, eg on your feet all day/manual labour.</li> </ul>			
<p><b>The consequences of a sedentary lifestyle</b></p>				
<p>The consequences of a sedentary lifestyle</p>	<p>Definitions of sedentary and lifestyle. Possible consequences of a sedentary lifestyle:</p> <ul style="list-style-type: none"> <li>•• weight gain/obesity</li> <li>•• heart disease</li> <li>•• hypertension</li> <li>•• diabetes</li> <li>•• poor sleep</li> <li>•• poor self-esteem</li> <li>•• lethargy.</li> </ul>			
<p>Obesity and how it may affect performance in physical activity and sport</p>	<p>Definition of obesity. Obesity and how it may affect performance in physical activity and sport:</p> <ul style="list-style-type: none"> <li>•• limits stamina/cardiovascular endurance</li> <li>•• limits flexibility</li> <li>•• limits agility</li> <li>•• limits speed/power.</li> </ul> <p>Causes ill health (physical):</p> <ul style="list-style-type: none"> <li>•• cancer</li> <li>•• heart disease/heart attacks</li> <li>•• diabetes</li> <li>•• high cholesterol.</li> </ul> <p>Causes ill health (mental):</p> <ul style="list-style-type: none"> <li>•• depression</li> <li>•• loss of confidence.</li> </ul> <p>Causes ill health (social):</p> <ul style="list-style-type: none"> <li>•• inability to socialise</li> <li>•• inability to leave home.</li> </ul>			
<p>Somatotypes</p>	<p>Definitions of the following body types:</p> <ul style="list-style-type: none"> <li>•• endomorph</li> <li>•• mesomorph</li> <li>•• ectomorph.</li> </ul> <p>You need to be able to identify the most suitable body type for particular sports (or positions within a sport) and justify your choice.</p>			
<p><b>Energy use, diet, nutrition and hydration</b></p>				

Energy use	<p>Energy is measured in calories (Kcal) and is obtained from the food we eat.</p> <p>The average adult male requires 2,500 Kcal/day and the average adult female requires 2,000 Kcal/day but this is dependent upon:</p> <ul style="list-style-type: none"> <li>•• age</li> <li>•• gender</li> <li>•• height</li> <li>•• energy expenditure (exercise).</li> </ul>			
Nutrition – reasons for having balanced diet	<p>There is no single food that contains all the nutrients the body needs.</p> <p>A balanced diet contains lots of different types of food to provide the suitable nutrients, vitamins and minerals required.</p> <p>The reasons for a balanced diet:</p> <ul style="list-style-type: none"> <li>•• unused energy is stored as fat, which could cause obesity (particularly saturated fat)</li> <li>•• suitable energy can be available for activity</li> <li>•• the body needs nutrients for energy, growth and hydration.</li> </ul>			
Nutrition – the role of carbohydrates, fat, protein and vitamins/minerals	<p>A balanced diet contains 55–60% carbohydrate, 25–30% fat, 15–20% protein.</p> <p>Carbohydrates are the main and preferred energy source for all types of exercise, of all intensities.</p> <p>Fat is also an energy source. It provides more energy than carbohydrates but only at low intensity.</p> <p>Protein is for growth and repair of muscle tissue.</p> <p>Vitamins and minerals are for maintaining the efficient working of the body systems and general health.</p> <p>Students do not need to be taught about specific vitamins and minerals.</p>			
Reasons for maintaining water balance (hydration)	<p>Definition of dehydration.</p> <p>Water balance (hydration) prevents dehydration.</p> <p>Dehydration results in:</p> <ul style="list-style-type: none"> <li>•• blood thickening (increased viscosity), which slows blood flow</li> <li>•• increases in heart rate/heart has to work harder/irregular heart rate (rhythm)</li> <li>•• increase in body temperature/overheat</li> <li>•• slowing of reactions/increased reaction time/poorer decisions</li> <li>•• muscle fatigue/cramps.</li> </ul> <p>You need to understand and be able to evaluate the consequences of dehydration to performance in different sporting activities.</p>			